

**Work Order ID 79404**

Wednesday, January 25, 2012 3:05:53 PM

**\*79404\***

Page 1

Item ID: D206-642-612

Accept

**\*N900040100\***

Setup Start

**\*NS1\***

Revision ID:

Item Name: Float Skidtube RH

Start Date: 1/25/2012 Start Qty: 1.00

**\*1\***

Required Date: 1/31/2012 Req'd Qty: 1.00

**\*1\***

Reference: REWORK

Cust Item ID:

Customer:

<b>DART</b>		TEL: 1-613-632-3336 FAX: 1-613-632-4443	
TRANSPORT CANADA APPROVAL # 09-69			
PN	D206-642-612	CHG	CHG002
DESC	Float Skidtube RH	STC	SH98-4
LOT	B32453	STC	SA00475SE
MODEL	Bell 206A/B	STC	
US PATENT # 5735484 CANADA FOREIGN PATENTS PENDING		MADE IN CANADA	

Approvals: Process Plan: *MUF*Date: *12-01-25* Tooling:

Date:

QC:

Date: SPC (Y/N):

Date:

**\*NR2\***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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Draw Nbr	Revision Nbr
----------	--------------

IIN D206-642

O

150

**\*150\***

HandFinish

Hand Finishing

Memo

PULL FROM STOCK D206-642-612 B 32453

*CHG002*

REMOVE CAP AND WASH LPS3 OUT OF TUBE PER ECN 09-616

160

**\*160\***

QC

Quality Control

QC5- Inspect part completeness to step on W/O

Memo

170

**\*170\***

HandFinish

Hand Finishing

Memo

RE-ASSEMBLE I D2646 Aft Cap and seal with Sikaflex. Clean excess adhesive.

A/RSikaflex-291 *119508*Sikaflex expire date: *12/08***B79404 D206-642-612***12-01-30 (1)*  
*for MJS 12-1-31**12-01-31 (1)**12-1-31*

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

**Work Order ID 79404****\*79404\***

Page 2

Wednesday, January 25, 2012 3:05:53 PM

Item ID: D206-642-612

Accept

**\*N900040100\***Setup Start **\*NS1\***

Revision ID:

Item Name: Float Skidtube RH

Stop **\*NS2\***Start Date: 1/25/2012 Start Qty: 1.00 **\*1\***

Cust Item ID:

Required Date: 1/31/2012 Req'd Qty: 1.00 **\*1\***

Customer:

Reference: REWORK

Approvals: Process Plan: Date: Tooling: Date:

Run Start **\*NR1\***

QC: Date: SPC (Y/N): Date:

Stop **\*NR2\***Sequence ID/  
Work Center IDOperation  
DescriptionSet Up/  
Run HoursTool ID Tool # Plan  
CodeAccept Reject Reject Insp.  
Qty Qty Number Stamp

180

QC5- Inspect part completeness to step on W/O

0.00

**\*180\***

QC

Memo

0.00

Quality Control

12.01.31 (1)

190

Pick Kit

0.00

**\*190\***

Packaging

Memo

0.00

Packaging

REMOVE D3672-5 X 16  
AND REPLACE WITH D3672-7 X 16  
PER DSI 9467 (ECN 09-616)

12/2/11

200

QC4- 100% Inspect kits for completeness

0.00

**\*200\***

QC

Memo

0.00

Quality Control

812102101

# Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

**Work Order ID 79404****\*79404\***

Page 3

Wednesday, January 25, 2012 3:05:53 PM

Item ID: D206-642-612

Accept

**\*N900040100\***Setup Start **\*NS1\***

Revision ID:

Stop **\*NS2\***

Item Name: Float Skidtube RH

Start Date: 1/25/2012 Start Qty: 1.00 **\*1\***

Cust Item ID:

Required Date: 1/31/2012 Req'd Qty: 1.00 **\*1\***

Customer:

Reference: REWORK

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

Run Start **\*NR1\***

QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Stop **\*NR2\***Sequence ID/  
Work Center IDOperation  
DescriptionSet Up/  
Run Hours

Tool ID

Tool #

Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

210

Identify as per dwg &amp; Stock Location: \_\_\_\_\_

0.00

**\*210\***

Packaging

Memo

0.00

Packaging

ID AND STOCK UNDER NEW BATCH NUMBER AND NEW CHANGE  
NUMBER

ADD NEW PAPERWORK

CHG004

220

QC21- Final Inspection - Work Order Release

0.00

**\*220\***

QC

Memo

0.00

Quality Control

M.C.S 12/02/01

P12-021

# Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Picklist Print

Wednesday, January 25, 2012 3:05:52 PM

Page 1  
7

Work Order ID: 79404

Parent Item: D206-642-612

Parent Item Name: Float Skidtube RH

Start Date: 1/25/2012

Required Date: 1/31/2012

Start Qty: 1.00

Required Qty: 1.00

Comments: IPP Rev:B05.10.27Revised pick listKJ/EC  
IPP Rev:C 07-02-23 As per IIN D206-642 Rev K JLM  
IPP Rev:D 07-12-05 ECN 1080p Rev:L DD verified by:ec  
IPP Rev:E 09-01-06 update part list DD verified by:

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D3672-5 Phenolic Washer		Manufactured	Ng				Each	1,864.0000		16			
						<u>Location</u>		<u>Loc Qty</u>		<u>Loc Code</u>			
						ST060		1864					
						35521		1075					
						<u>44679</u>		220					
						50354		569					
D3672-7 Phenolic Washer		Manufactured	No				Each	1,068.0000		16			
						<u>Location</u>		<u>Loc Qty</u>		<u>Loc Code</u>			
						ST060		1068					
						73488		68					
						<u>76279</u>		1000					

# Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries



Qty -041	Part Number	Description
X	D3288-041	SKIDTUBE ASSEMBLY
1	D2600-1-240	EXTRUSION
1	D2646	AFT CAP
1	D2647	CAP
9	D2649	CROSS BOLT SPACER
6	D3275-1	CROSS BOLT SPACER
2	D3286-1	DOUBLER
2	D3286-3	SPACER
1	D3289-041	FLOAT WEB
1	D3413-1	RING
1	D3415-041	NUT PLATE
1	D3535-15	WEARSHOE
1	D3535-21	WEARSHOE
1	D3535-35	WEARSHOE
1	D3535-41	WEARSHOE
1	D3536-15	GASKET
1	D3536-21	GASKET
1	D3536-35	GASKET
1	D3536-41	GASKET
7	D3537-1	WEARPAD
1	D3537-3	WEARPAD
12	D3683-1	INSERT
64	ALS7-1032-130	INSERT (or AKS4-1032-130, ALS4-1032-130, AELS-1032-130)
66	AN3C4A	BOLT
1	AN4C5A	BOLT
1	AN960C416	WASHER
78	AN960C10L	WASHER
2	CCR264SS3-3	RIVET
2	CR3212-4-03	RIVET
52	CR3212-4-04	RIVET
12	MS27039C1-05	SCREW (or AN3C3A BOLT)
2	NAS1515H3L	WASHER

#### GENERAL NOTES:

- MATERIAL: N/A
- FINISH: ACID ETCH, ALODINE ASSEMBLY PER DART QSI 005 4.1  
POWDER COAT WHITE (REF. 4.3.5.1) PER DART QSI 005 4.3
- TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- UNITS: INCHES UNLESS OTHERWISE NOTED
- BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- IDENTIFICATION: NONE
- WEIGHT: 20.8 LBS
- DAMAGE TOLERANCE ON FWD BEND:  
THERE SHOULD BE NO VISIBLE WRINKLES IN THE BEND FROM THE GROUND TO A HEIGHT OF 5 INCHES ABOVE THE GROUND. IT IS ACCEPTABLE TO POLISH OUT GOUGES UP TO 0.020 DEEP IN THE BENT PORTION OF THE TUBE. A MAXIMUM REDUCTION IN DIAMETER OF 0.150" IS ACCEPTABLE IN THE BENT PORTION OF THE TUBE.
- BOND D3289-041 FLOAT WEB INTO D3288-1 OUTER TUBE WITH NON-STRUCTURAL SIKAFLEX-241/291 ADHESIVE PER DART QSI 015. ENSURE HOLES LINE-UP.
- ALL HOLES DRILLED ON CENTERLINES EXCEPT WHERE SHOWN
- DRILL Ø0.297 HOLES FOR D3683-1 INSERTS BEFORE FINISH. INSTALL D3683-1 INSERTS AFTER FINISH
- DRILL Ø0.297 HOLES FOR ALS7-1032-130 INSERTS USING DT3288-1T2 BEFORE FINISH. INSTALL ALS7-1032-130 INSERTS AFTER FINISH. SEAL WEARSHOE BOLTS WITH SIKAFLEX -241/-291
- WELDING: PER DART QSI 004
- COAT ALL EXPOSED FASTENERS WITH LPS LABORATORIES "LPS PROCYON" AFTER FINAL ASSEMBLY, CLEAN EXCESS OFF POWDER COATING WITH MEK DEGREASER.

# 79404

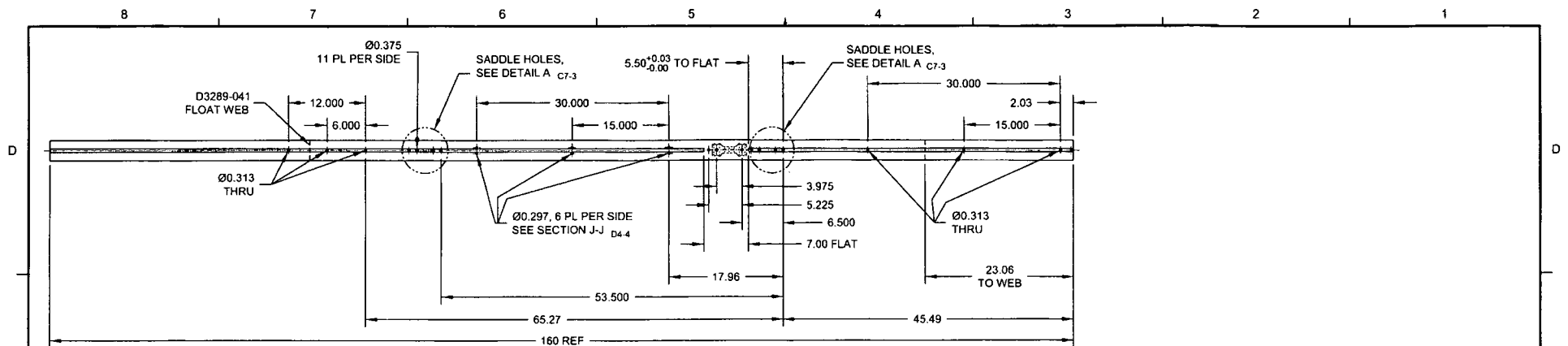
RELEASED  
09/06/17

G	REFORMAT DWG, RMV LPS-3 (ZN B6-3) RMV C'BORE & ADD SECTION K-K (ZN C2-4)	CP	09.06.17
F	SUBSTITUTE FLOAT BAG INSERT W/SPEC CTRL DWG WAS ALS7-1032-130; IS NOW D3683-1	DC	07.11.21
E	MID-FLOAT HOLES WERE MOVED 2.00" FWD AND ROTATED INBOARD AND OUTBOARD BY 17° INSERTS ARE NOW INSTALLED AT THESE LOCATIONS	MB	07.09.14
D	DIMENSIONS ADDED	DC	07.06.04
C	NEW INSERTS, SS WEARSHOES AND GASKETS	PH	06.12.19
B	CHANGE INSERTS	CP	05.03.18
A	NEW ISSUE	CP	04.05.17
REV.	DESCRIPTION	BY	DATE
DESIGN	CP		
DRAWN	CP		
CHECKED			
MFG. APPR.			
APPROVED			
DE APPR.			
DATE	09.06.17		

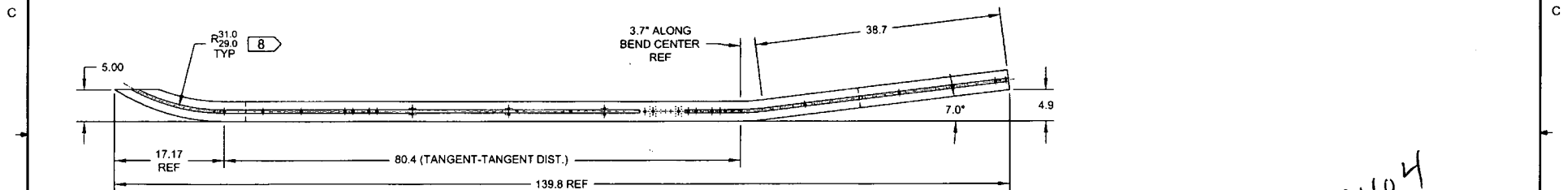
**DART AEROSPACE LTD**  
HAWKESBURY, ONTARIO, CANADA

DRAWING NO. REV. G  
D3288 SHEET 1 OF 4  
TITLE SCALE  
SKIDTUBE ASSEMBLY NTS

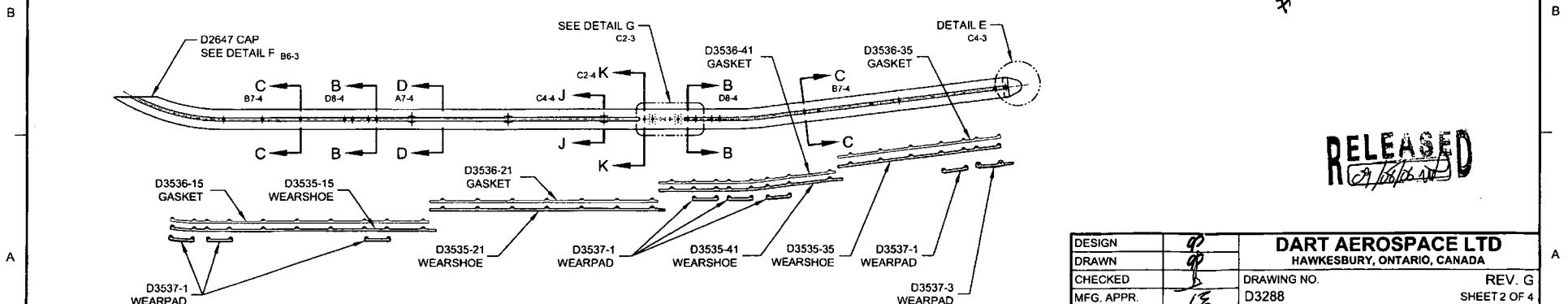
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**D3288-041 DRILLING/WEB ASSEMBLY DETAIL**



**D3288-041 BENDING DETAIL**

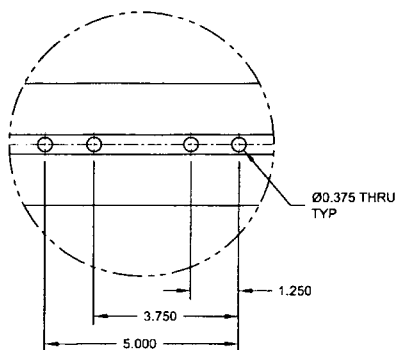


**D3288-041 WELDING DETAIL/SKIDTUBE ASSEMBLY**

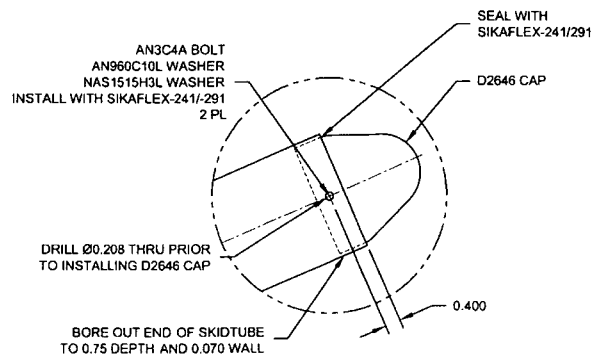
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29/10/16

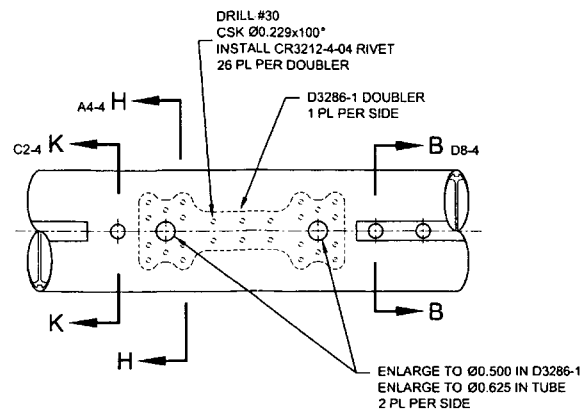
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DRAWN	92	HAWKESBURY, ONTARIO, CANADA	
CHECKED	92	DRAWING NO. D3288	REV. G
MFG. APPR.	13	SHEET 2 OF 4	
APPROVED	AN	TITLE	SCALE
DE APPR.		SKIDTUBE ASSEMBLY	NTS
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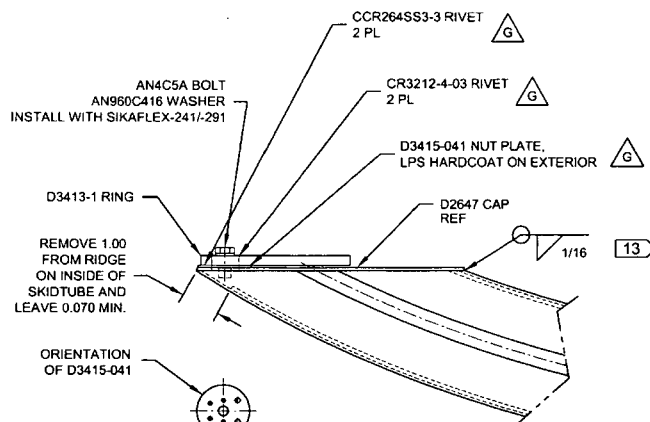
**DETAIL A: DRILL DETAIL** D6-2, D4-2  
SADDLE HOLES, SCALE 5X



**DETAIL E** B3-2  
SCALE 5X



**DETAIL G** B5-2  
SCALE 5X







**DETAIL F NOTES**

1. CUT TUBE LEVEL
2. REMOVE RIDGE ON FWD SIDE
3. LOCATE D2647 (TRIM AS NECESSARY)
4. WELD D2647 IN PLACE PER DART QSI 004
5. GRIND FLUSH
6. RIVET D3415-041 NUT PLATE IN PLACE  
NOTE: MASK THREADS IN D3415-041 PRIOR TO FINISH

**DETAIL F: END FINISHING DETAIL** B7-2  
SCALE 5X

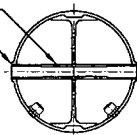
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09/06/17

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CHECKED		DRAWING NO.	REV. G
MFG. APPR.		D3288	SHEET 3 OF 4
APPROVED		TITLE	SCALE
DE APPR.		SKIDTUBE ASSEMBLY	NTS
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D2649 SPACER

13



AFTER DRILLING AND BENDING ASSEMBLY, PERFORM THE FOLLOWING FOR Ø0.375 SADDLE HOLES ONLY:  
1. CHAMFER HOLE 0.030x45°  
2. INSERT D2649 SPACER  
3. WELD INTO PLACE AND GRIND FLUSH  
4. C'BORE TO Ø0.313x0.75 DEEP

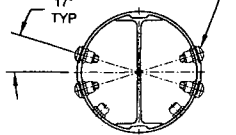
B7-2, B5-2, D1-3

### SECTION B-B

FOR Ø0.375 SADDLE HOLES ONLY  
8 PL, SCALE 5X

AFTER FINISH, INSTALL D3683-1 INSERT AND PLUG INSERTS USING MS27039C1-05 SCREWS AND AN960C10L WASHERS 12 PL

17" TYP



11

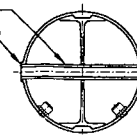
### SECTION J-J

SCALE 5X

D5-2, B6-2

D2649 SPACER

13

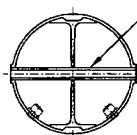


AFTER DRILLING AND BENDING ASSEMBLY, PERFORM THE FOLLOWING FOR THIS HOLE ONLY:  
1. CHAMFER HOLE 0.030x45°  
2. INSERT D2649 SPACER  
3. WELD INTO PLACE AND GRIND FLUSH

B5-2

### SECTION K-K

1 PL, SCALE 5X



D3275-1 SPACER

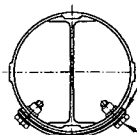
13

CHAMFER 0.030x45° TYP

### SECTION C-C

FOR Ø0.313 HOLES ONLY  
6 PL, SCALE 5X

B7-2, B4-2



GASKET WEARSHOE WEARPAD REF

ALS7-1032-130 INSERT  
AN3C4A BOLT  
AN960C10L WASHER  
64 PL

12

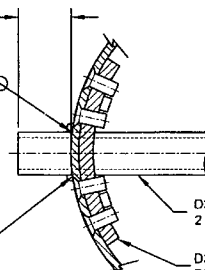
### SECTION D-D

FOR WEARSHOES INSTALL ONLY  
32 PL, SCALE 5X

B6-2

0.425 TYP

13



D3286-3 SPACER  
2 PL

D3286-1 DOUBLER  
REF

TO INSTALL D3286-1/3:  
1. GRIND OFF FLANGE IN AREA SHOWN, FLUSH WITH ROUND TUBE  
2. LOCATE & DRILL D3286-1 DOUBLER USING D73286-1T1  
3. ENLARGE HOLES IN D3286-1 TO Ø0.500  
4. ENLARGE HOLES IN TUBE TO Ø0.625  
5. RIVET D3286-1 TO TUBE  
6. INSERT D3286-3 SPACER  
7. WELD IN PLACE AND GRIND FLUSH

### SECTION H-H

NOT TO SCALE

D3-3

# 79404

RELEASED  
9/18/06

DESIGN			<b>DART AEROSPACE LTD</b>
DRAWN			HAWKESBURY, ONTARIO, CANADA
CHECKED			DRAWING NO. REV. G
MFG. APPR.			D3288 SHEET 4 OF 4
APPROVED			TITLE SCALE
DE APPR.			SKIDTUBE ASSEMBLY NTS
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4.9 206A/B HIGH GEAR FLOAT SKIDTUBES, TRI-BAG COMPATIBLE (D206-642)  
 32.19 206A/B HIGH GEAR FLOAT SKIDTUBES, TRI-BAG COMPATIBLE (ICA-D206-642)

ITEM	QTY -611	QTY -612	QTY -613	QTY -614	QTY -641	QTY -654	PART NUMBER	DESCRIPTION
	X						D206-642-611	SKIDTUBE INSTALLATION, LH
		X					D206-642-612	SKIDTUBE INSTALLATION, RH
			X				D206-642-613	SKIDTUBE INSTALLATION, LH, THRU BOLT
				X			D206-642-614	SKIDTUBE INSTALLATION, RH, THRU BOLT

IS:

12B	16	16	16	16			D3672-7	WASHER
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WAS:

12B	16	16	16	16			D3672-5	WASHER
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*Handwritten:* 79404

DESIGN	CP	<b>DART AEROSPACE USA, INC</b>	
DRAWN	CP	PORT HADLOCK, WA	
CHECKED	<i>[Signature]</i>	DRAWING NO.	REV. A
MFG. APPR.	N/A	DSI 9467	SHEET 2 OF 2
APPROVED	<i>[Signature]</i>	TITLE	SCALE
DE APPR.	<i>[Signature]</i>	WASHER CHANGE	NTS
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